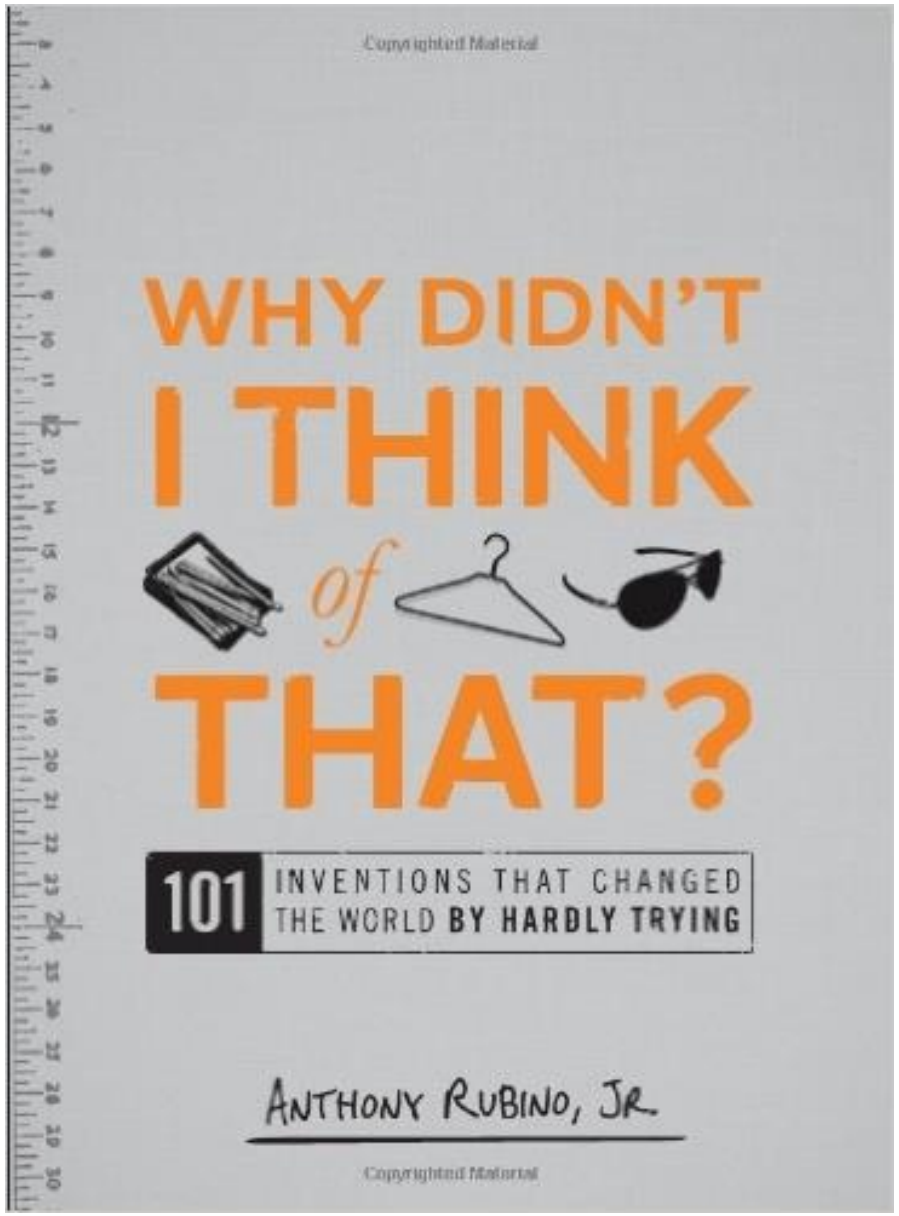
簡單其實不簡單

張大健

CCCA 2016-3-26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WHY DIDN'T
I THINK
of
THAT?
101 INVENTIONS THAT CHANGED THE WORLD BY HARDLY TRYING
ANTHONY RUBINO, JR.
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為什麼我沒有想到呢？

再別康橋　徐志摩 1928

輕輕的我走了，

正如我輕輕的來；

我揮一揮衣袖，

不帶走一片雲彩。

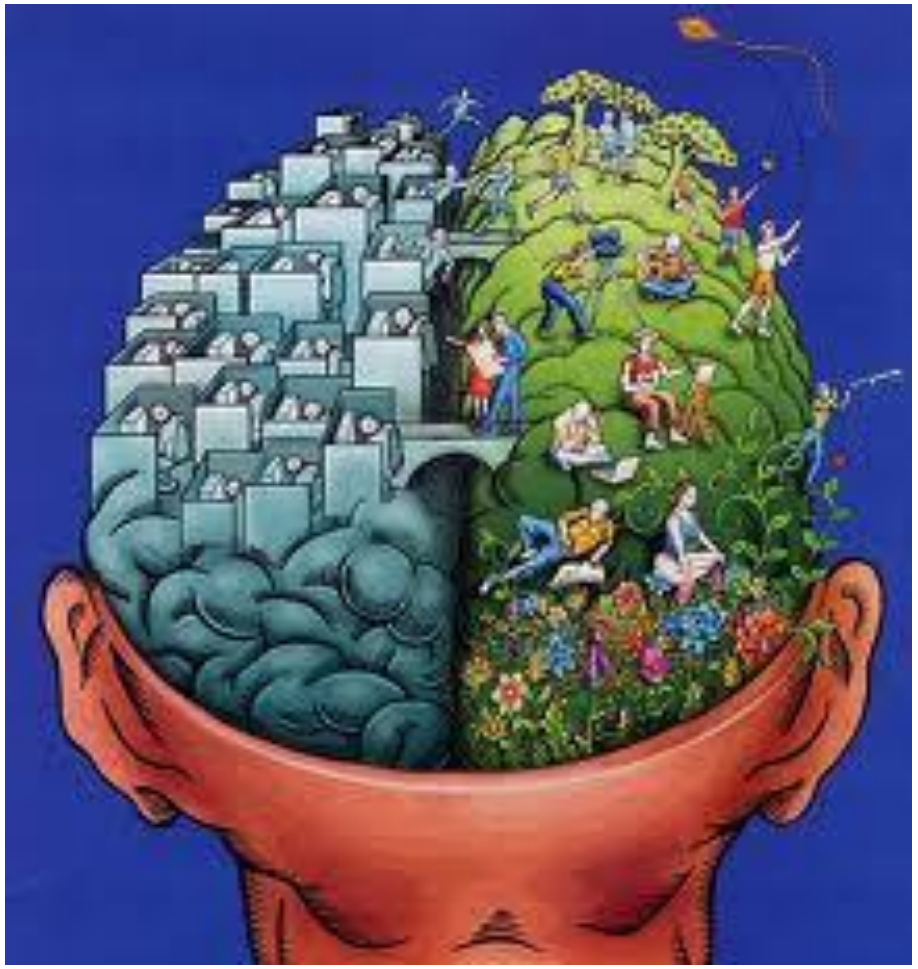
再見創意　張大健 2012

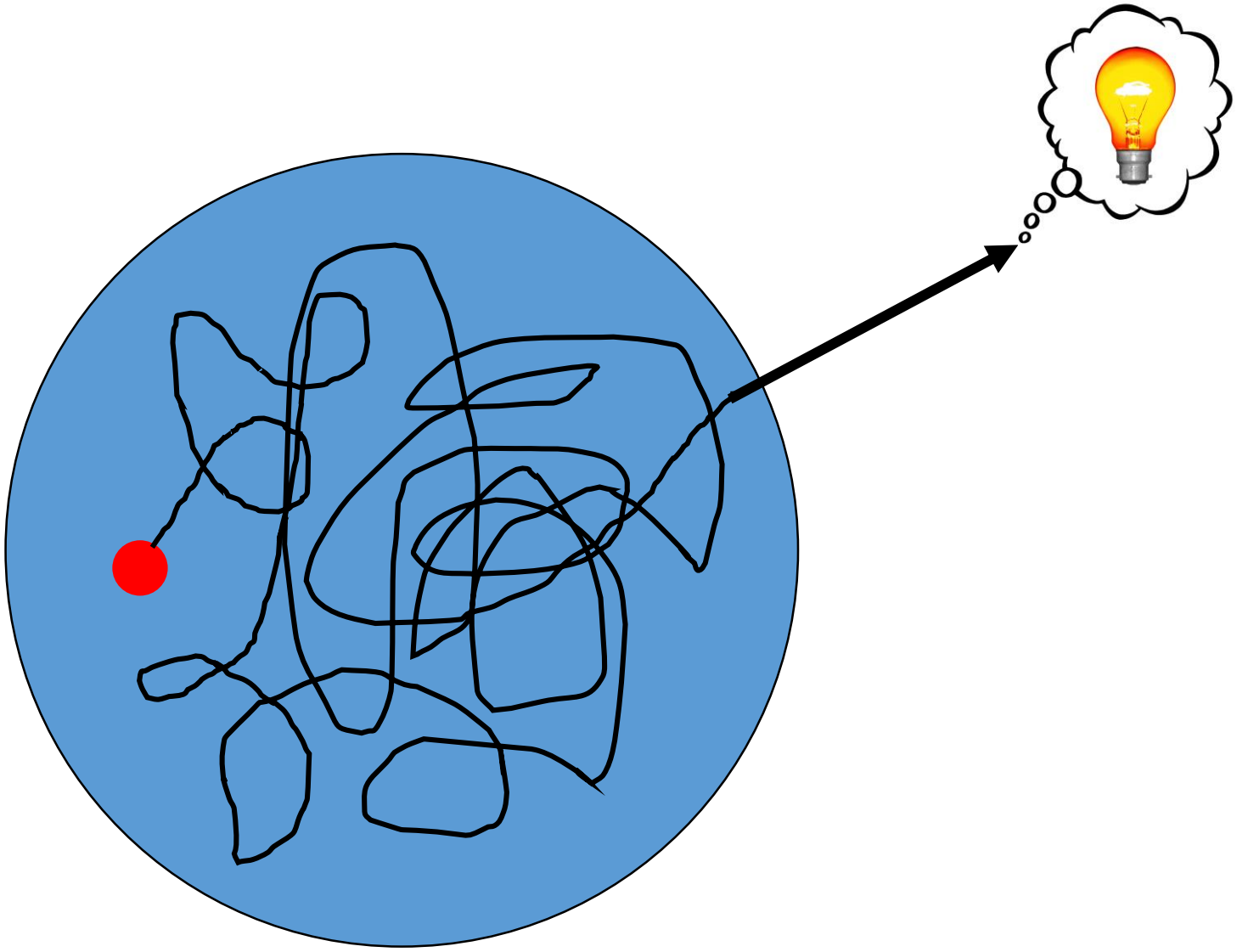
悄悄的她走了，

正如她悄悄的來；

就像一陳微風，

吹不皺半絲腦海。





技巧

模糊思維（Think Sfumato)

簡單化

大局觀 （Go Holistic)

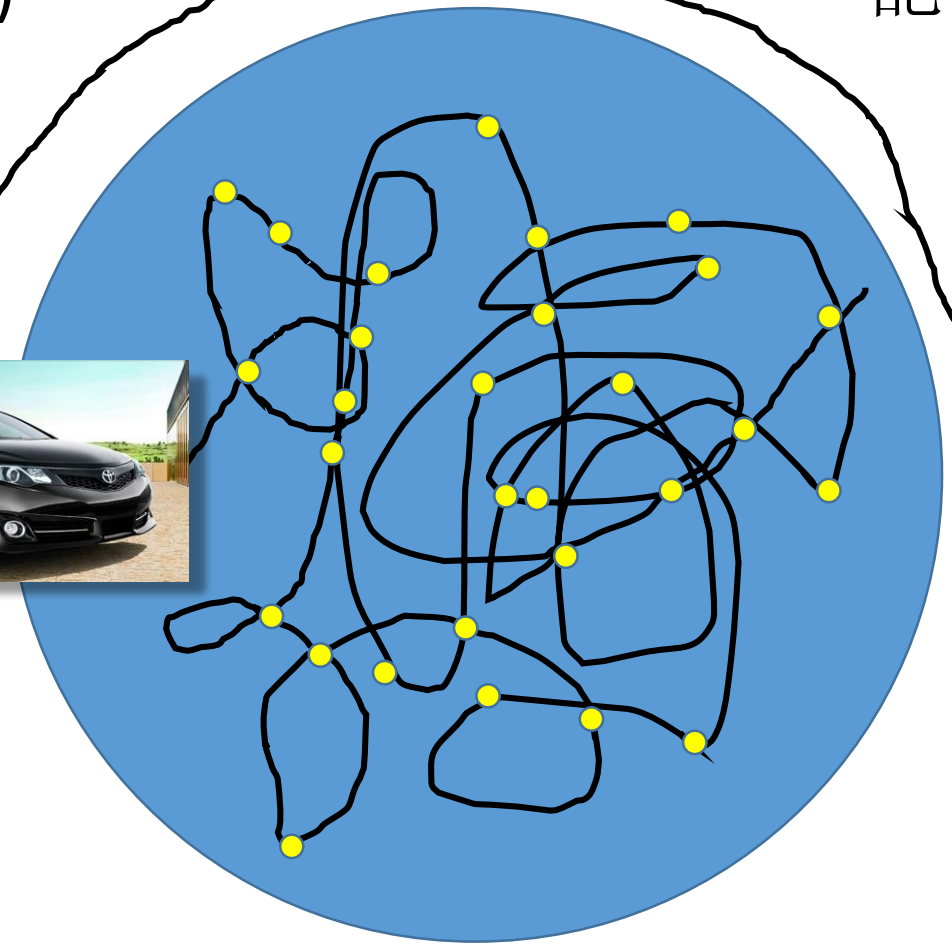
聯想力

視覺感

記憶力

抓關鍵

猜測



習慣

Curiosity 好奇心

觀察，求知慾

態度

Passion 熱忱

Perseverance 執著

SIMPLE CAN BE HARDER THAN COMPLEX:

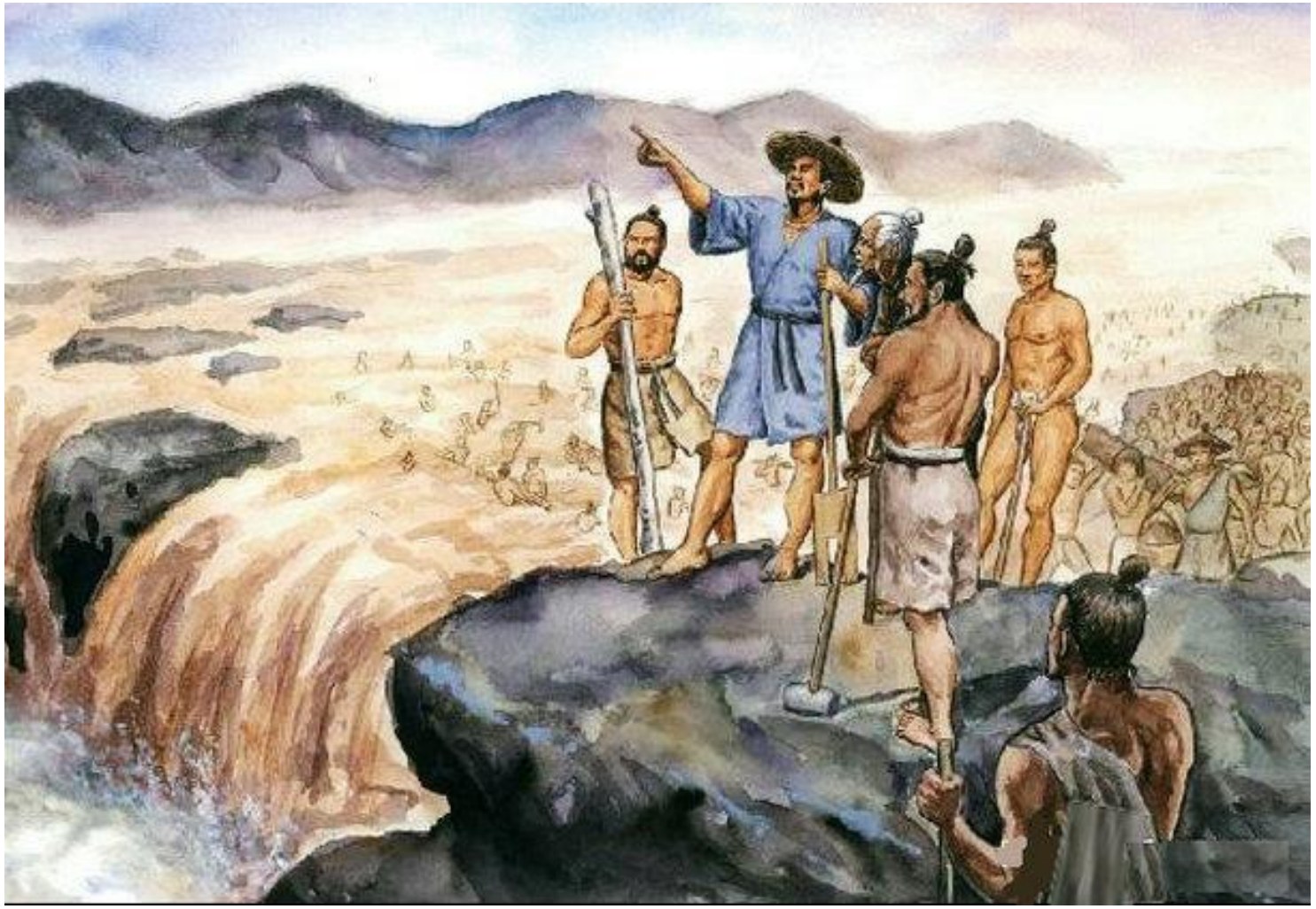
You have to work hard to get your thinking clean to make it simple. But it's worth it in the end, because once you get there, you can move mountains.

---Steve Jobs---

水來土掩

用”加“來解決問題
最後導致失敗

大禹治水



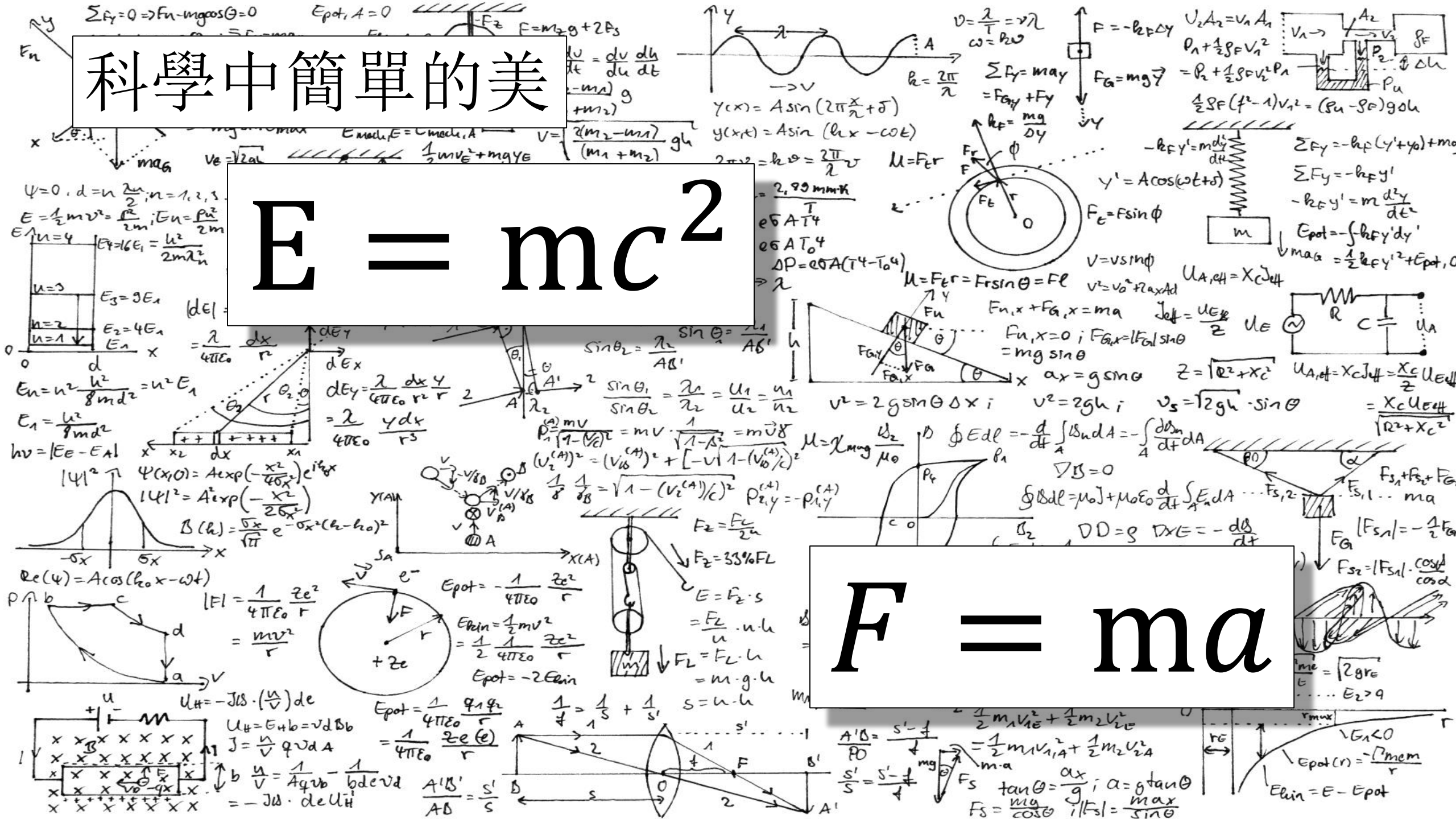
疏通河道
用”減“來解決問題
最後獲得成功


爱上一个不回家的人……
唉！

科學中簡單的美

$$E = mc^2$$

$$F = ma$$



一位名人對簡單化的看法

It is not a daily increase

but a daily decrease,

hack away the inessentials.

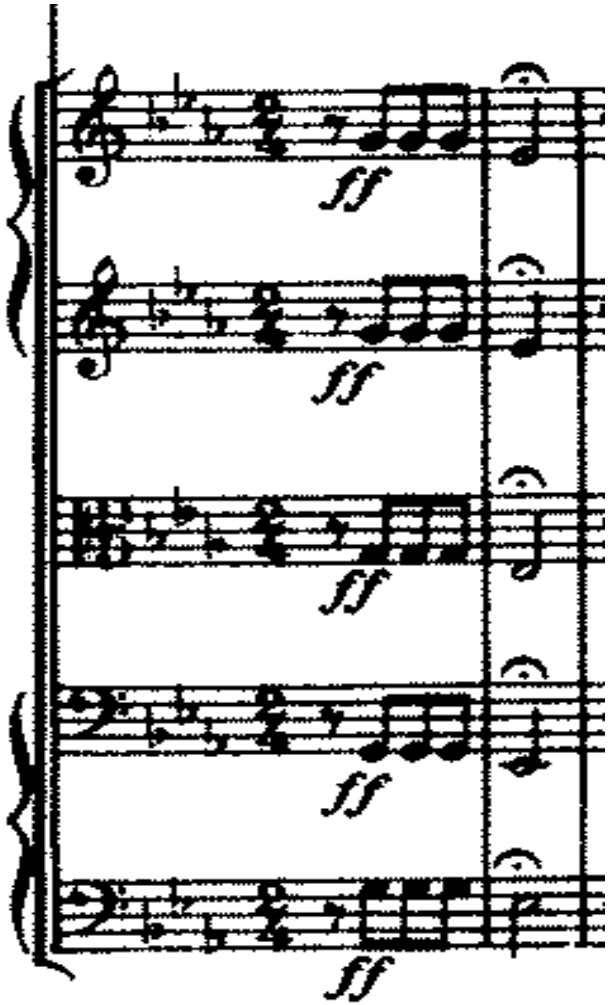
Violin I

Violin II

Viola

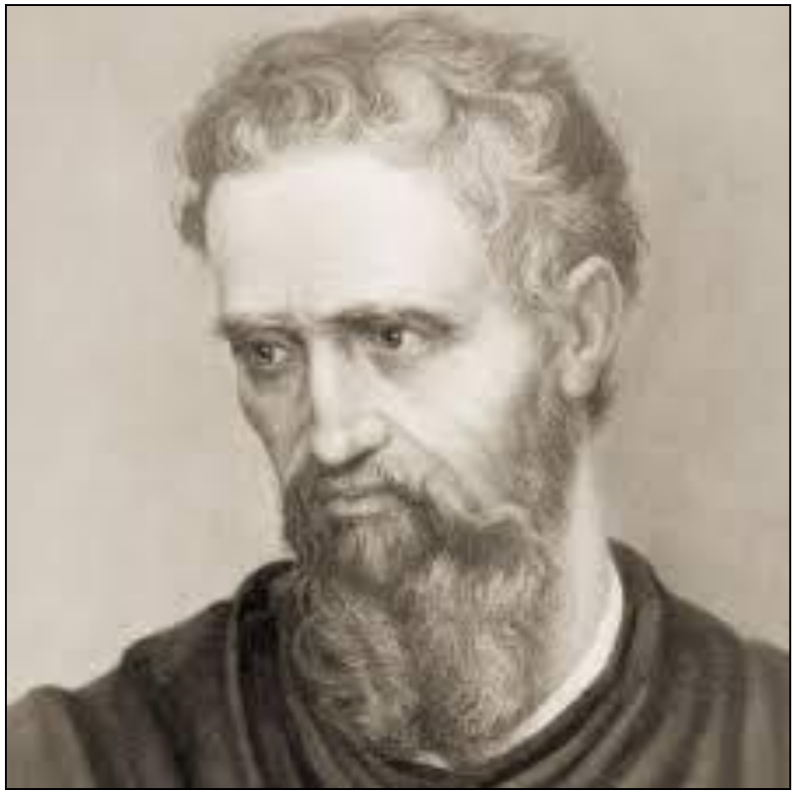
Cello

Bassoon



音樂中簡單的美

米高安琪羅的鉅作
The Statue of David

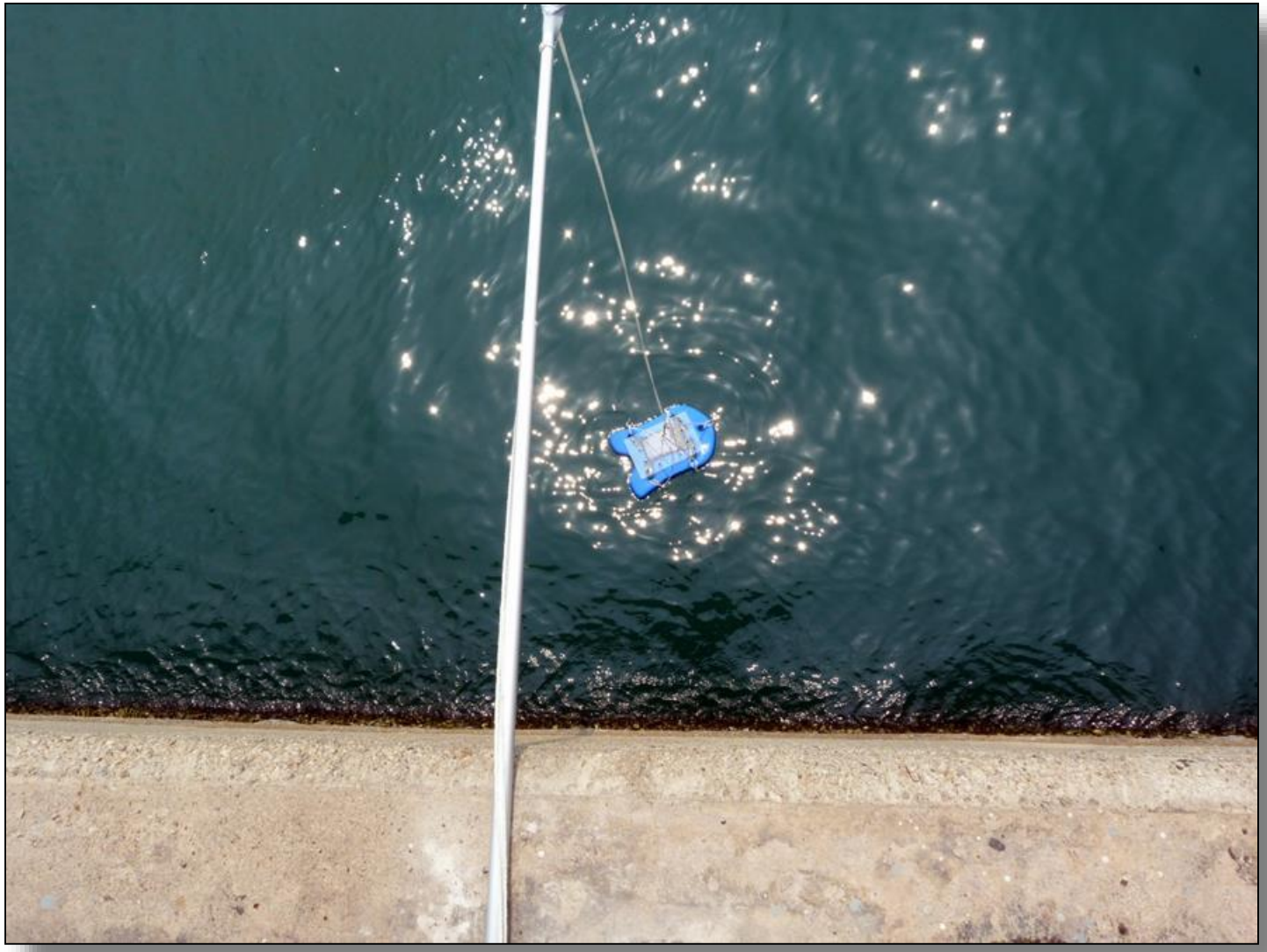


當我第一次看到這塊大石，我可以看到大衛站在裡面。我只要用我的鑿子和錘把不需要的部分一片片地敲掉，大衛就職啊我眼前出現了。

（用的是“減”的思維）

用同樣的思維摺紙兔

紅磡碼頭測海浪

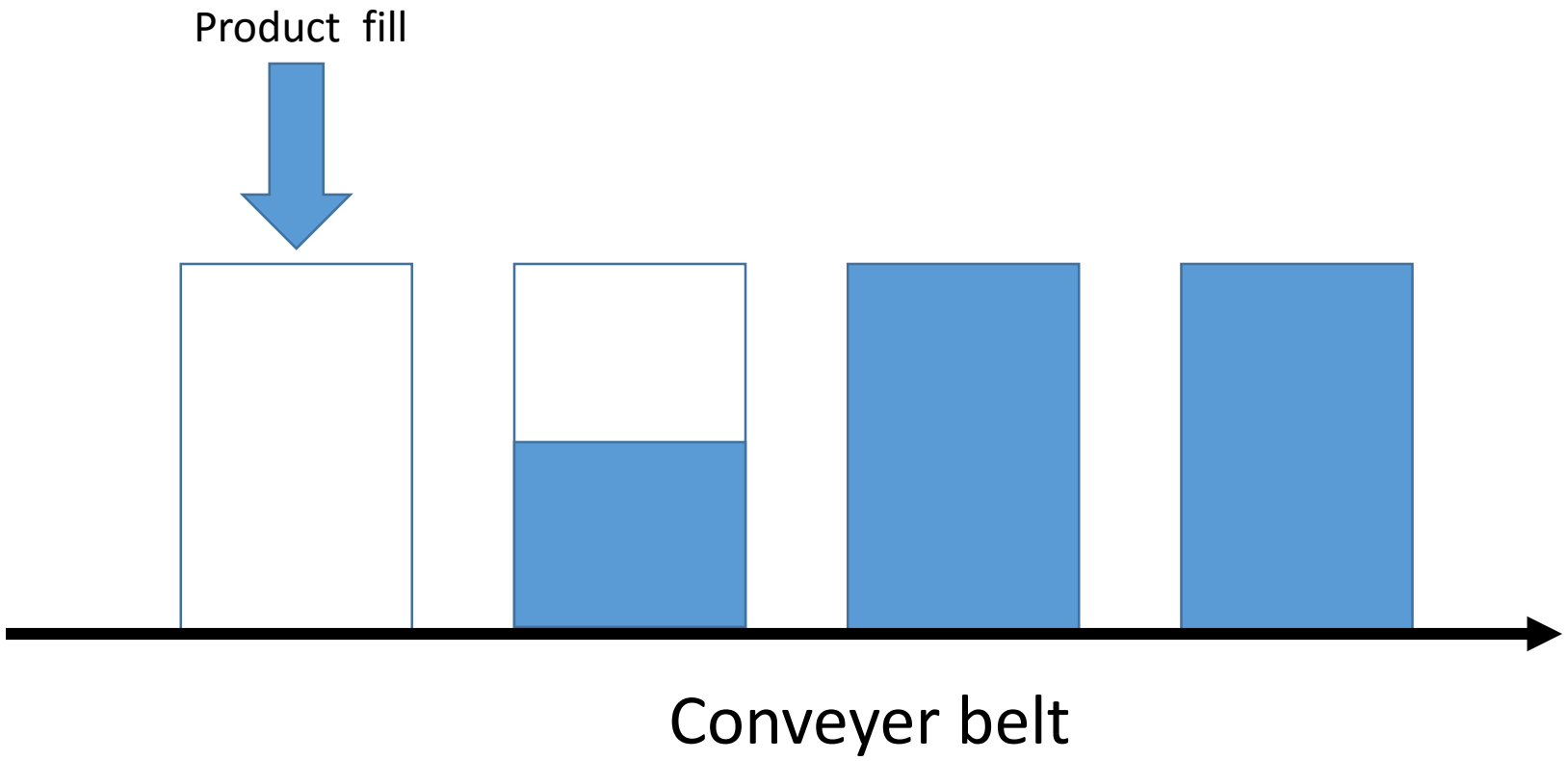


怎麼樣可以防止iPhone 過熱？

“加”和“減”的解決方案。

熒光棍

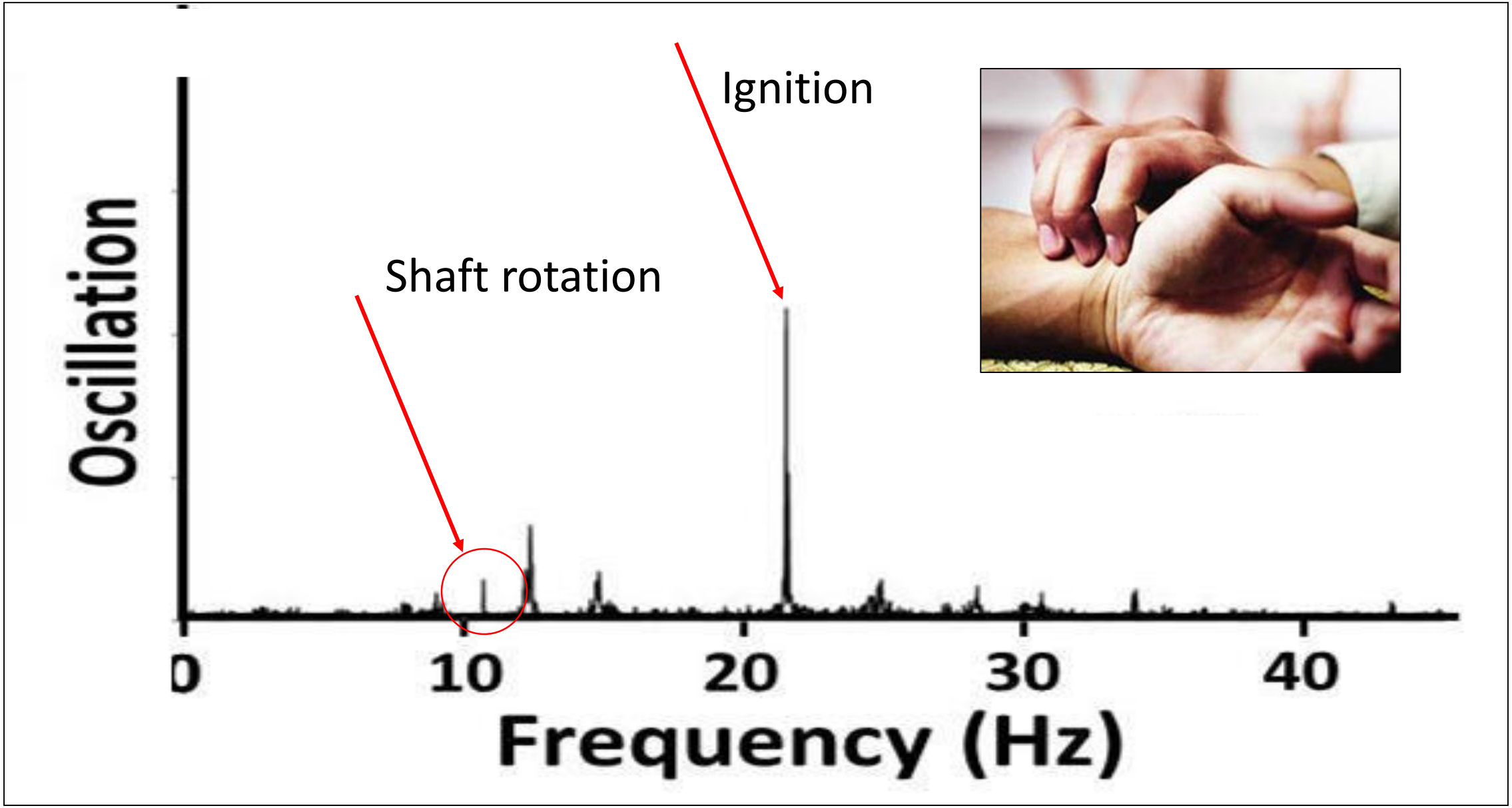
台糖生產線上的智慧



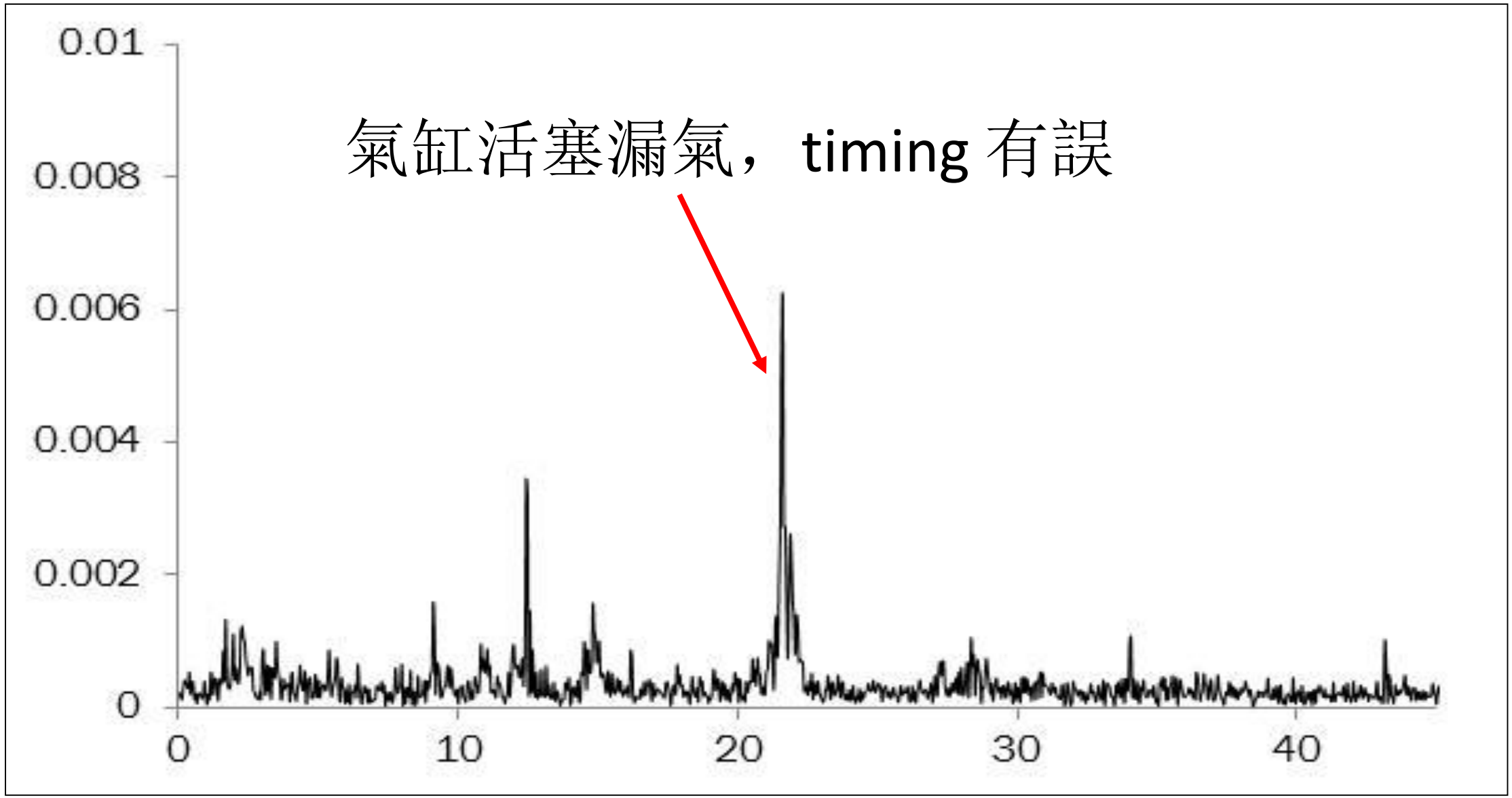
香港小巴的振動

香港 **29M** 小巴

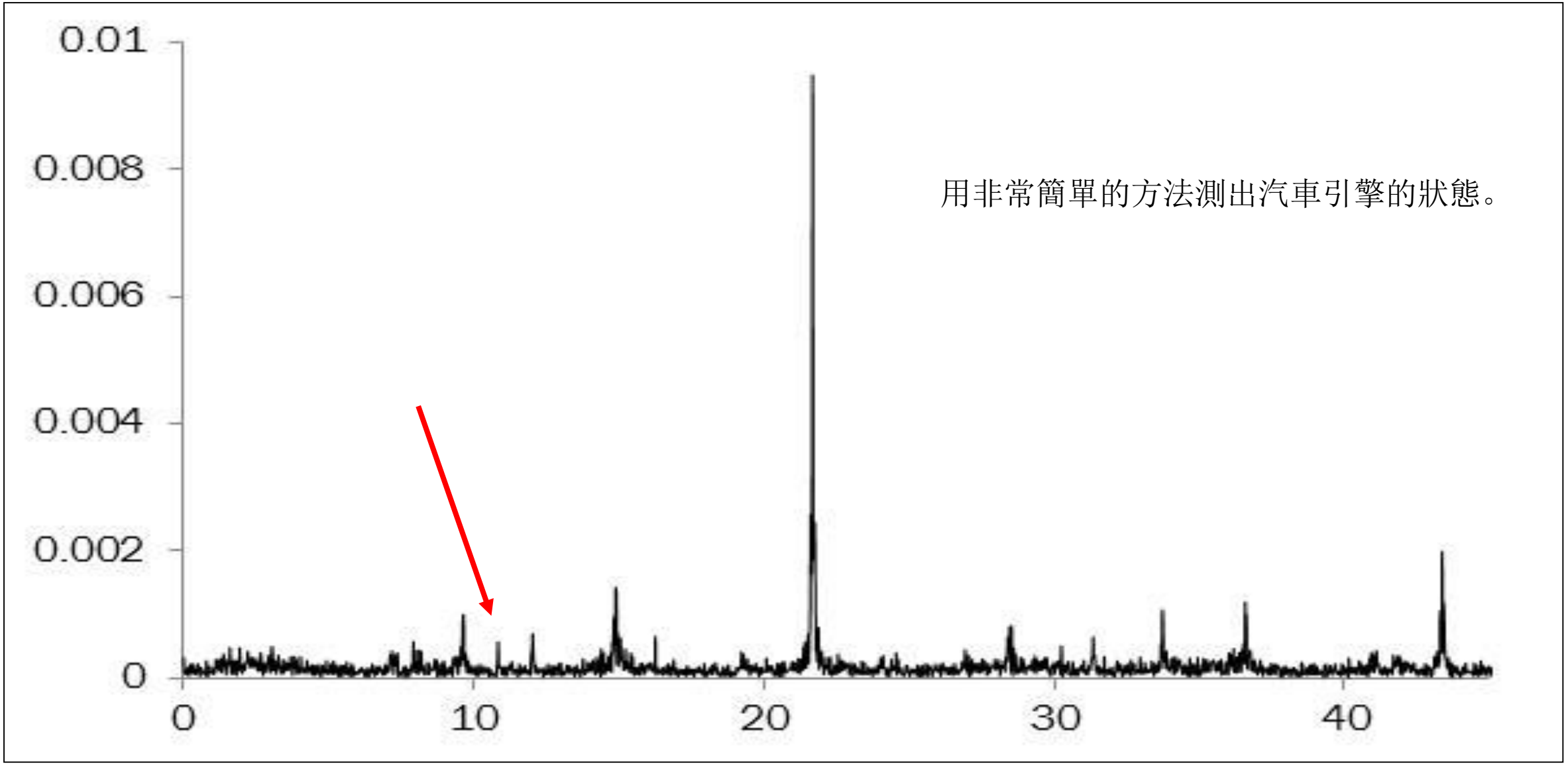
替小巴把脉


Ignition
Shaft rotation
Oscillation
0
10
20
30
40
Frequency (Hz)

維修以前

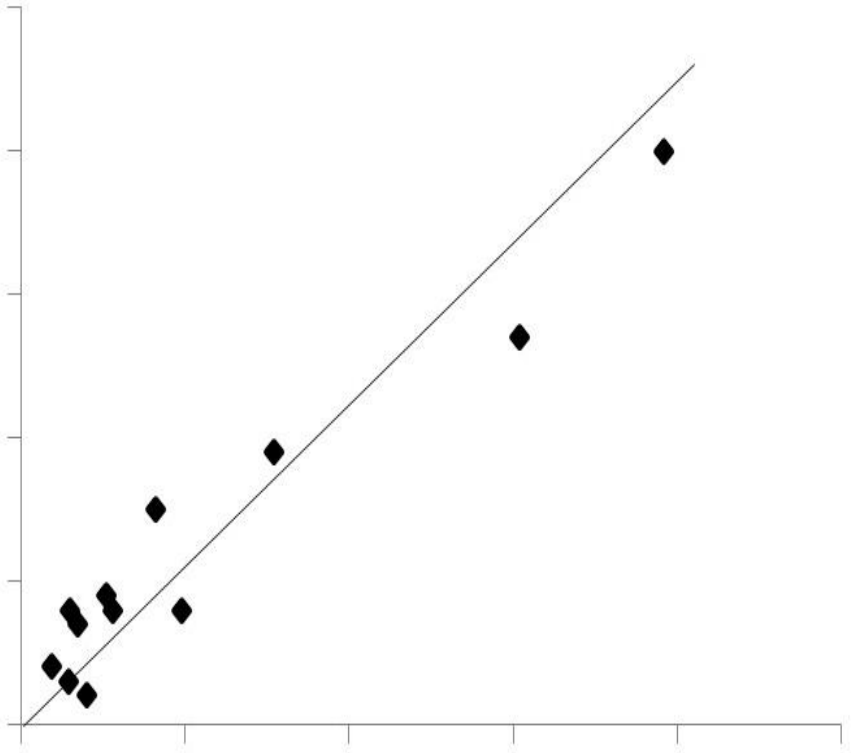


維修以後



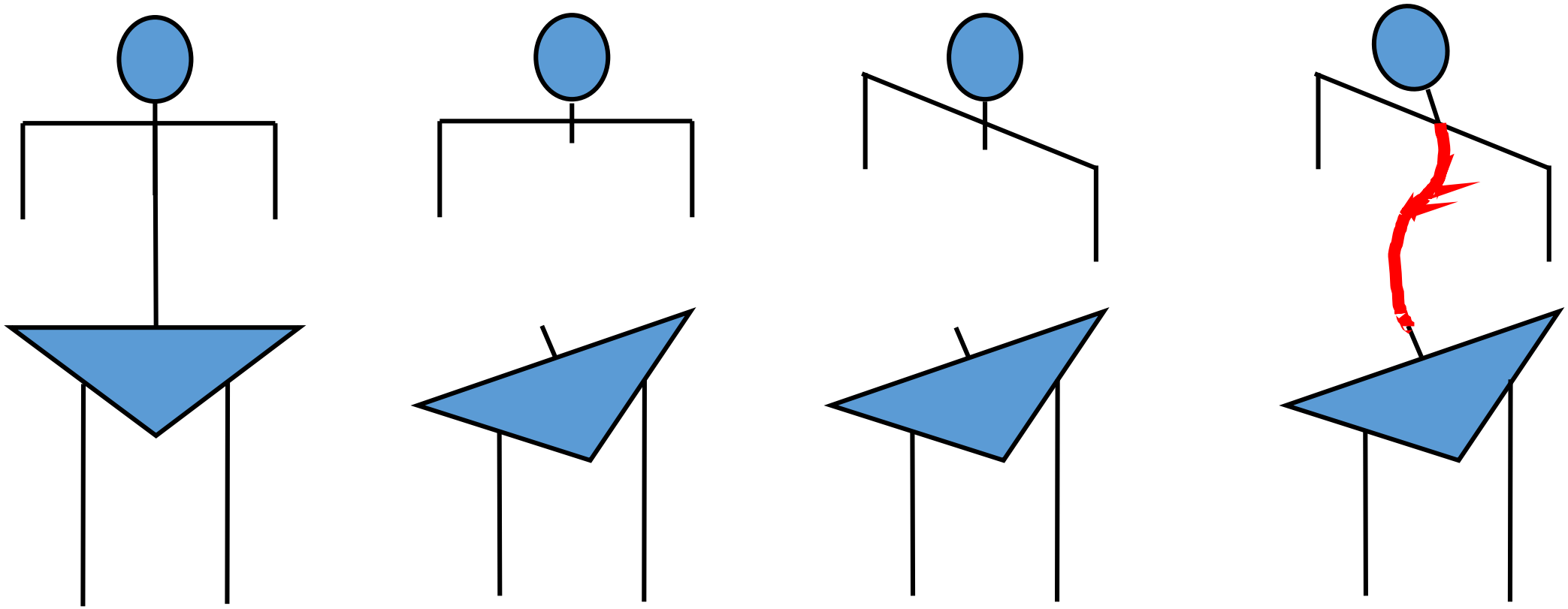
用非常簡單的方法測出汽車引擎的狀態。

人體平衡指數測量

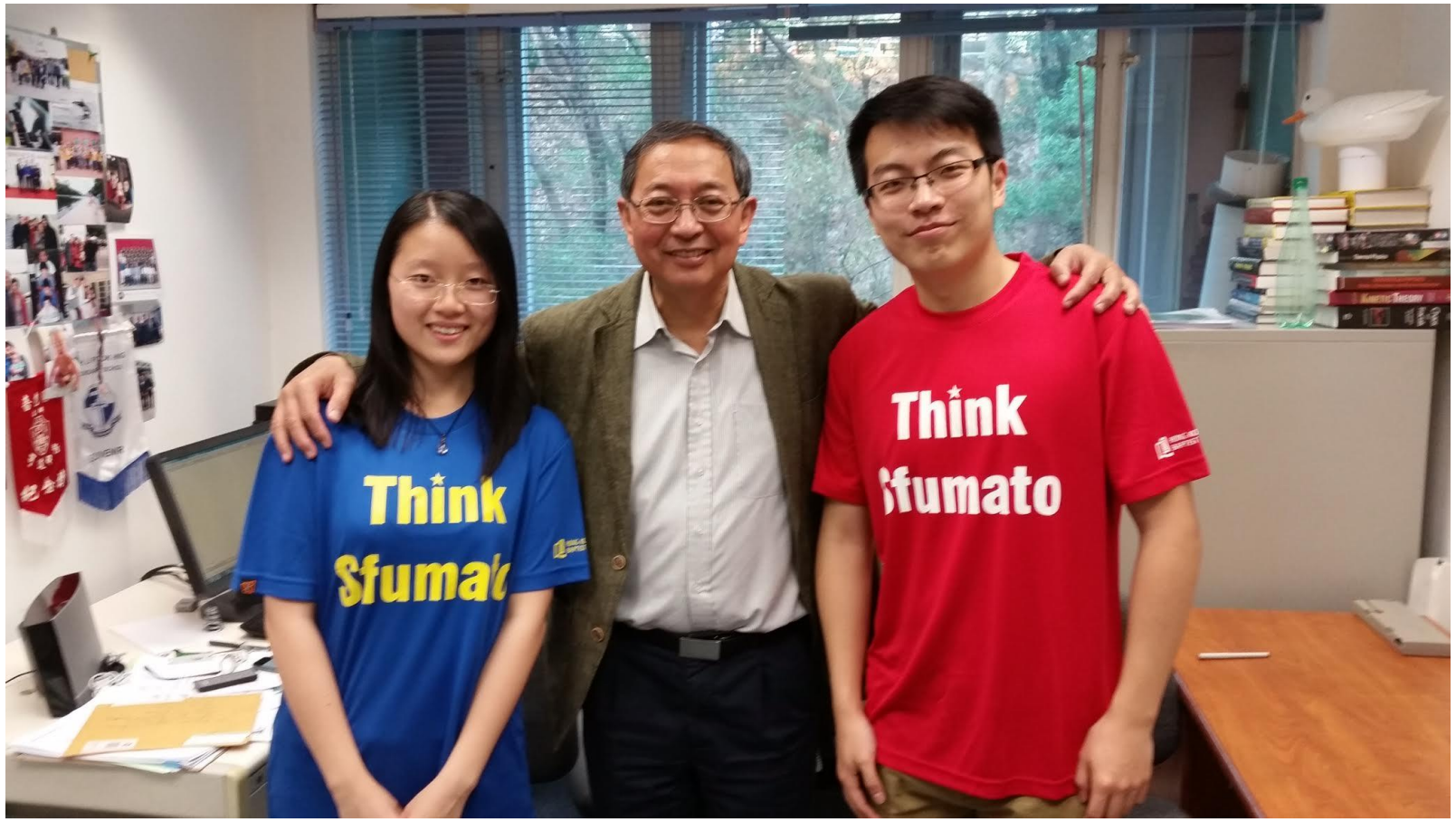


包含了各種有關步態的訊息

長短腳 （Leg Length Discrepancy - LLD)



Go Holistic: 視野要廣
Thick Sfumatao: 思維要從模糊演變到清晰。（摒除主見，包容多角度的想法，慢慢消化）



我和學生們

我的老師和師母